Geometry Name ANSWER KEY

UNIT 3 REVIEW PACKET

Period. _____ Date _____

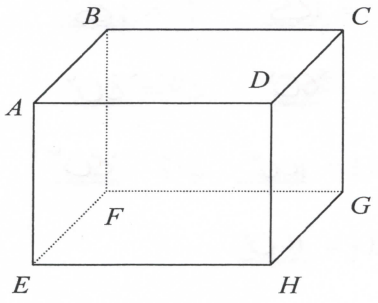
Directions: In the box provided next to each target section, put an (S) if you were able to complete the section by *yourSELF*, an (H) if you received a *minimal* amount of *HELP* from me, a classmate, or another source, or a (D) if you felt the section was *DIFFICULT* and required you to get *a lot* of help. This will help provide you by giving you feedback as to what topics you should be focusing on as you prepare for the test. **THIS IS DUE THE DAY OF THE TEST!**

Vocabulary Check: Match the vocabulary word with its correct definition.

1. B Angles that are on opposite sides of a transversal and inside two lines.
2. A Angles that are on opposite sides of a transversal and outside the two lines.
3. D & E Angles formed by a transversal and are supplementary.
4. F Two lines that don't intersect and go in the same direction.
5. H Two lines that don't intersect and don't go in the same direction.
6. G Lines that form right angles.
7. C Angles formed by a transversal that can be found in the same position

A. Alternate Exterior angles
B. Alternate Interior angles
C. Corresponding angles
D. Consecutive Interior angles
E. Consecutive Exterior angles
F. Parallel lines
G. Perpendicular lines
H. Skew lines

Target A: Refer to the figure below for Questions 8-11



8. Name 3 planes intersecting plane ABC

ADEH, CDHG, BCGF, ABFE

9. Name 3 segments parallel to $\overline{AB}$

$\overline{CD}$, $\overline{GH}$, $\overline{FE}$

10. Name 3 segments skew to $\overline{AB}$

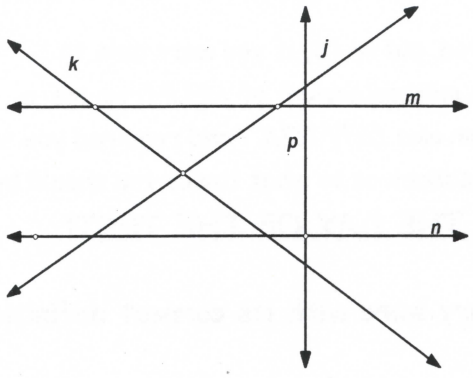
$\overline{DH}$, $\overline{CG}$, $\overline{EH}$ $\overline{FG}$

11. Name 3 segments perpendicular to $\overline{AB}$

$\overline{AD}$, $\overline{AE}$, $\overline{BC}$ $\overline{BF}$

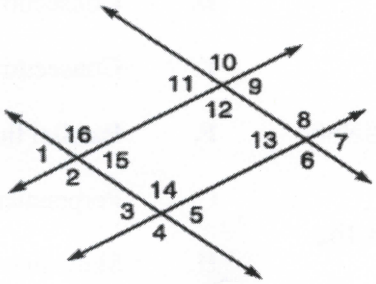
Target B

12. Name all possible transversals of **lines *m* and *n*** in the picture below.



k , j , p

Identify each pair of angles as either: *alternate interior, alternate exterior, corresponding, or consecutive interior angles.*



13. $\angle 1$ *and* $\angle 3$ CORRESPONDING

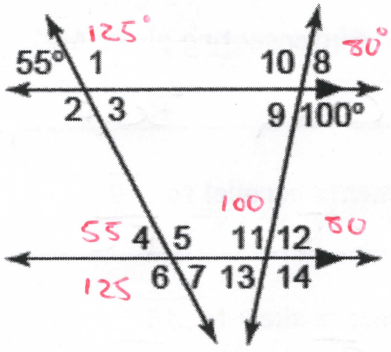
14. $\angle 2$ *and* $\angle 14$ ALTERNATE INTERIOR

15. $\angle 4$ *and* $\angle 8$ ALTERNATE EXTERIOR

16. $\angle 12$ *and* $\angle 13$ CONSECUTIVE INTERIOR

Targets C & D

17. Find the remaining angle measures.



$\angle 1 =$ 125° $\angle 2 =$ 125° $\angle 3 =$ 55°

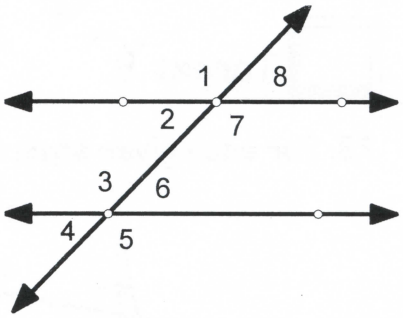
$\angle 4 =$ 55° $\angle 5 =$ 125° $\angle 6 =$ 125°

$\angle 7 =$ 55° $\angle 8 =$ 80° $\angle 9 =$ 80°

$\angle 10 =$ 100° $\angle 11 =$ 100° $\angle 12 =$ 80°

$\angle 13 =$ 80° $\angle 14 =$ 100°

Use the picture at the right for numbers 18 and 19



18. If $\angle 3 = 72^\circ$, find $m\angle 2$ 108°.

$\angle 3 + \angle 2 = 180^\circ$

$72 + \angle 2 = 180$

$\angle 2 = 108$

19. Find the value of the x if $m \parallel l$, $m\angle 1 = 2x + 44$ and $m\angle 5 = 5x + 38$.

$\angle 1 = \angle 5$

$2x + 44 = 5x + 38$

$44 = 3x + 38$

$6 = 3x$

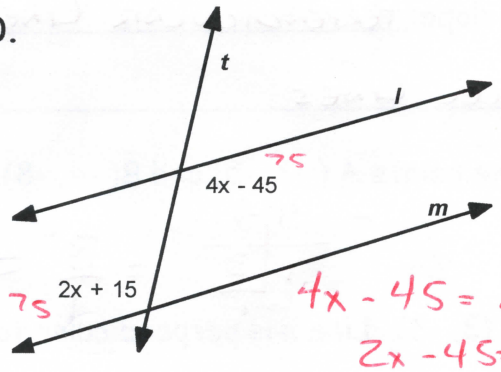
$2 = x$

X= 2

$\angle 1 =$ 48°

For 20-21, find the values of the variable which would make line / parallel to line *m*.

20.



$4x - 45 = 2x + 15$

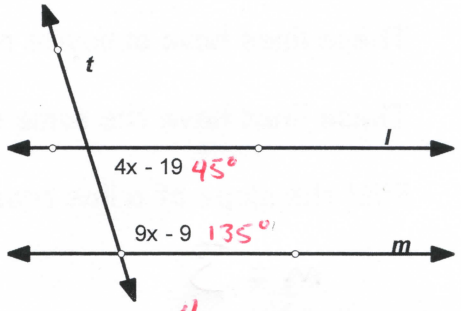
$2x - 45 = 15$

$2x = 60$

$x = 30$

x = 30°

21.



$4x - 19 + 9x - 9 = 180$

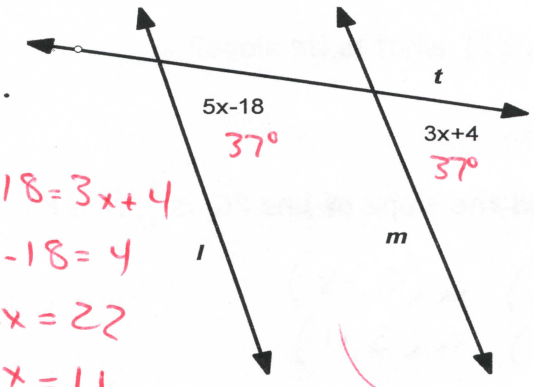
$13x - 28 = 180$

$13x = 208$

$x = 16$

x = 16°

22.



$5x - 18 = 3x + 4$

$2x - 18 = 4$

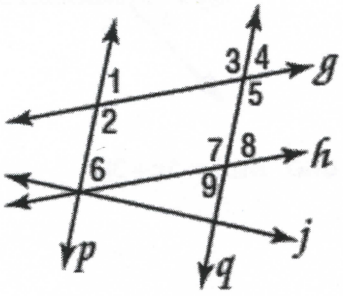
$2x = 22$

$x = 11$

x = 11°

Target E

23. For each given statement, determine which lines must be parallel.



$\angle 2 \cong \angle 3$ P ∥ Q

$\angle 4 \cong \angle 8$ G ∥ H

$\angle 2 + \angle 6 = 180°$ G ∥ H

$\angle 7 + \angle 6 = 180°$ P ∥ Q

Targets F, G, & H

For 24 and 25, put the <u>most appropriate</u> answer: ***parallel lines, perpendicular lines, intersecting lines.***

24. These lines have opposite reciprocals for slope: PERPENDICULAR LINES

25. These lines have the same slope: PARALLEL LINES

26. Find the slope of a line passing through the points A (-3, -5) and B(-4, -8).

$m = 3$

$$\begin{array}{r|l} -(-4 & -8) \\ \hline 1 & 3 \end{array} \quad \hookrightarrow 1 \qquad = \frac{3}{1} = 3$$

27. Line *m* contains the points A (-2, 7) and B (3, -3). Line *n* is perpendicular to line *m*, what is the slope of line *n*?

$$\begin{array}{r|l} A\ (-2 & 7) \\ -\ B\ (3 & -3) \\ \hline -5 & 10 \\ \hookrightarrow -5 & \end{array} \quad \text{SLOPE OF } m \qquad = \frac{-10}{5} = -2$$

→ SLOPE OF $n = \frac{1}{2}$

28. If line *q* is parallel to line *m* (in problem 27), what is its slope?

SLOPE OF Q $= -2$

29. Given point P (x,-1) and point Q (3,y) and the slope of line PQ is $\frac{2}{3}$, find P & Q

$$\begin{array}{r|l} P\ (x & -1) \\ -\ Q\ (3 & y) \\ \hline 3 & 2 \\ & 3 \end{array}$$

≠

P (6, -1) Q (3, -3)

P (0, -1) Q (3, +1)